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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,832

02/25/2005

Ruediger Halfmann

2080.1062

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7590

07/01/2008

STAAS & HALSEY LLP

SUITE 700

1201 NEW YORK AVENUE, N.W.

WASHINGTON, DC 20005

EXAMINER

LAM, JOSEPH M

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,832	Applicant(s) HALFMANN ET AL.	
	Examiner JOSEPH LAM	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-15, 21, 22 is/are rejected.
- 7) ☒ Claim(s) 16-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/25/2005 and 05/12/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' arguments filed February 25, 2005 have been fully considered but they are not persuasive.

2. Applicant argues that:

Sano does not teach "a velocity determining device determining at least one of actual velocities and relative velocities of the at least one mobile stations and mobile interference sources."

The examiner respectfully disagrees because:

As a recap, as recited in the rejection of claim 21, Sano discloses a station for at least one of transmission and reception in a radio communication system with at least one of mobile stations and mobile interference sources comprising:

A velocity determining device determining at least one of actual velocities (as a speed) and relative velocities (as a period of time) of the at least one of mobile stations (as terminal station 100) and mobile interference sources (see paragraph 0148: The power-suppressed base station controls so as to suppress the transmission power of the individual data channel 13 for the terminal station 100. Therefore, it is possible to speedily reduce the transmission power of interfering base stations having less likelihood of being used for site diversity combining in the terminal station 100. Since, interference base station having of being used or active, then interference terminal station 100 is active or combined as well, and see paragraph 0026: period of time). Thus, at least this limitation of claim 21 is anticipated by Sano.

3. Further, applicant argues that:

Sano does not disclose mobile transmitting and receiving stations, and generating a transmission signal at the first mobile transmitting station for transmitting sequence of data to the first mobile receiving station.

The examiner respectfully disagrees because:

As a recap, as recited in the rejection of claim 11, Sano discloses a method for transmitting a sequence of data in a radio communication system, comprising: mobile transmitting (as a terminal station 100) and receiving stations (as a base station), and generating a transmission signal at the first mobile transmitting station for transmitting sequence of data (as data channel) to the first mobile receiving station (see paragraph 0067: The control channel 12 is used to inform the terminal station 100 from the base stations BS_1 to BS_n of information for allocation (transmitting) of individual data channels, information for specifying a peripheral base station usable for site diversity (as a mobile base station), and a transmission power of the common pilot channel for the base stations BS_1 to BS_n.

Thus, at least this limitation of claim 11 is anticipated by Sano.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by

another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 21 - 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Sano (US 2004/0198235 A1).

Sano discloses a station for at least one of transmission and reception in a radio communication system with at least one of mobile stations and mobile interference sources comprising:

- A velocity determining device determining at least one of actual velocities (as a speed) and relative velocities (as period of time) of the at least one of mobile stations and mobile interference sources ((see paragraph 0148: The power-suppressed base station controls so as to suppress the transmission power of the individual data channel 13 for the terminal station 100. Therefore, it is possible to speedily reduce the transmission power of interfering base stations having less likelihood of being used for site diversity combining in the terminal station 100. Since, interference base station having of being used or active, then interference terminal station 100 is active or combined as well, and see paragraph 0026: period of time).
- A carrier scanning device at least one of determining and identifying an interference free carrier for intended transmission of a sequence of data (see on fig. 6 at location 20, 21), and at least one of a threshold determining device determining a threshold value for a minimum difference between a desired receive signal and an interference signal (see on the paragraph [0035], line 1 - 5), and a duration setting device pre-setting a maximum possible transmission duration for transmitting the sequence of data (see on the paragraph [0035] line 13 - 16, and fig. 8 at location 32)

Further more, Sano discloses wherein a transmitting station not involved in the intended transmission of the sequence of data is a mobile interference source (see on the fig. 6 at the location 22.)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.,

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 11 - 15 are rejected under 35 U.S.C 103(a) as being unpatentable over Kubo (US 6249682 B1) in view of Larson et al (US 7218893 B2).

Regarding claim 11, Kubo teaches a method for transmitting a sequence of data in a radio communication system, comprising the steps of:

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- checking a radio interface by at least one of a first moving transmitting station and a first moving receiving station (see column 4, line 6 to 14: the receiving station to the transmitting station. The speed estimation unit 4 estimates the moving speed of the receiving station, and column 4, line 42 to 43: the moving speed of the transmitting station),
- to detect an approach to the first moving receiving station (see column 4, line 23 to 35: the moving speed can be estimated, if a change is detected. The speed estimation unit estimates the moving speed of the receiving station based on the change or an accumulated value of the transmission power control command)
- after said checking, generating a transmission signal at the first moving transmitting station for transmitting the sequence of data to the first moving receiving station via the radio interface during a length of time (as a timing) necessary to transmit the sequence of data without the interference source approach to the first receiving station interfering with the transmission signal (see column 5, line 44 to 51 and fig.3 : the timings of a spread on the transmitting side and despread on the receiving side; transmitting station transmit the data to receiving unit):

Kubo fails to teach the following:

- to detect an approach of the interference source
- checking for an interference signal of an interference source

However, Larson in the same field of endeavor discloses the following:

- checking for an interference signal of an interference source (see column 6, line 54 to 57: the source of interference signals in a GSM radio network is solved by our solution.

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Carrier elimination is used in our invention, which makes it possible to find interference signals).

- to detect an approach of the interference source (see column 4, line 31 to 33: At this stage the focus can be set on finding (as a detect) which TSC that is used by the interference source and how it is synchronised in time. This is done by correlating the remaining signal against all TSCs and for all time offset).

Therefore, it would have been obvious to the one of ordinary skill in the art at the time of the invention to combine the teaching of Kubo's moving transmitting station and moving receiving station (see column 4, line 6 to 14) in Larson's interference source (see column 6, line 54 to 57), in order to improve the transmitting and receiving without interference.

Regarding claim 12, Kubo in view of Larson further discloses comprising the following:

Kubo discloses at the first moving receiving station using at least one of actual and maximum possible relative velocity (see Kubo, column 4, line 6 to 14: moving speed of the receiving station) and the first moving receiving station to each other(see Kubo, column 4, line 6 to 14: moving speed of the receiving station)

Kubo fails to disclose one of determining and estimating an expected increase in intensity of the interference signal of the interference source. However, Larson discloses in the same of endeavor one of determining and estimating an expected increase in intensity of the interference signal (see Larson, column 4, line 26 to 30: interference signal) of the interference source(see Larson column 4, line 31 to 34: interference source). Therefore, it would have been obvious to the one of ordinary skill

in the art at the time of the invention to combine the teaching of Kabo's moving transmitting station and moving receiving station (see column 4, line 6 to 14) in Larson's interference source (see column 6, line 54 to 57), in order to improve the transmitting and receiving without interference.

Regarding claim 13, Kubo in view of Larson further comprising:

Kubo disclose at the first moving receiving station as a function of at least one of the actual and maximum possible relative velocity of the first moving transmitting station and the first moving receiving station to each other (see column 4, line 6 to 14: moving speed between transmitting and receiving station). Kubo fails to disclose one of determining and estimating an expected decrease in intensity of the interference signal. However, Larson discloses in the same field of endeavor one of determining and estimating an expected decrease in intensity of the interference signal (see Larson, column 6, line 14 to 16: interference signal moving at low speed). Therefore, it would have been obvious to the one of ordinary skill in the art at the time of the invention to combine the teaching of Kabo's moving transmitting station and moving receiving station (see column 4, line 6 to 14) in Larson's interference source (see column 6, line 54 to 57), in order to improve the transmitting and receiving without interference.

Regarding claim 14, Kubo in view of Larson further comprising locating,

Kubo discloses by the first moving receiving station (see Kubo, column 4, line 6 to 14: moving speed of the receiving station), within the detection area of the first moving

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receiving station(see column 4, line 23 to 35: detect) within a detection area based on a determinable velocity of the first moving receiving station (see column 4, line 23 to 35: detect. Kubo fails to disclose a usual interference source and a transmitted velocity of the interference sources. However, Larson discloses in the same field of endeavor a usual interference source and a transmitted velocity of the interference sources (see column 6, line 54 to 57: interference source). Therefore, it would have been obvious to the one of ordinary skill in the art at the time of the invention to combine the teaching of Kabo's moving transmitting station and moving receiving station (see column 4, line 6 to 14) in Larson's interference source (see column 6, line 54 to 57), in order to improve the transmitting and receiving without interference. Therefore, it would have been obvious to the one of ordinary skill in the art at the time of the invention to combine the teaching of Kabo's moving transmitting station and moving receiving station (see column 4, line 6 to 14) in Larson's interference source (see column 6, line 54 to 57), in order to improve the transmitting and receiving without noise.

Regarding claim 15, Kubo in view of Larson further discloses comprising:

Kubo discloses wherein at least one of a usually maximum possible and maximal sensible velocity is used for stations (see Kubo, column 4, line 6 to 9: the speed estimation to use in mobile communication), at least one of within and outside a detection area of the first moving receiving station (see Kubo, column 4, line 12 to 15: receiving station). Kubo fails to disclose interference sources for which no velocity information is available. However, Larson discloses in the same field of endeavor

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disclose interference sources for which no velocity information is available (see Larson, column 5, line 52 to 59: interference source).

Allowable Subject Matter

9. Claims 16-20 are objected to as being depend upon a reject base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph M. Lam whose telephone number is 571-270-

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1959. The examiner can normally be reached on Monday to Thursday from 7:30 to 5:30 eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 22, 2008
Examiner: Joseph Lam
AU: 2616

/Chi H Pham/
Supervisory Patent Examiner, Art
Unit 2616
6/26/08